

CLAIM AMENDMENTS

(added text shown with underlining; deleted text shown by ~~striketrough~~)

1. (CURRENTLY AMENDED) A process ~~Process~~ for the depolymerization of glycosaminoglycans ~~characterized by the use of~~ comprising: exposing said glycosaminoglycans to electron-beam radiation..
2. (CURRENTLY AMENDED) The process ~~Process~~ according to claim 1, in which said exposing step is performed by using a dynamic irradiation process.
3. (CURRENTLY AMENDED) The process ~~Process~~ according to ~~claims 1-2~~ claim 1, wherein the glycosaminoglycane is heparin.
4. (CURRENTLY AMENDED) The process ~~Process~~ according to ~~claims 1-3~~ claim 1, wherein the electron-beam radiation has an energy comprised between 100 and 1000 keV.
5. (CURRENTLY AMENDED) The process ~~Process~~ according to ~~claims 1-4~~ claim 1, wherein the process is performed on glycosaminoglycans in aqueous solution.
6. (CURRENTLY AMENDED) The process ~~Process~~ for the depolymerization of glycosaminoglycans according to claim 5, performed in the presence of an organic compound represented by formulas I, II and III:



wherein each R is independently selected from the group consisting of H, OH, CHO, C₁-C₆ alkyl and acyl, optionally substituted by oxygen atoms; two R groups optionally join together to form a ring.

7. **(CURRENTLY AMENDED)** The process ~~Process~~ according to claim 6, wherein the organic compound is selected from the group consisting of methanol, ethanol, n-propanol, isopropanol, n-butanol, isobutanol, glycerol, tetrahydrofuran, dioxane, diethylether, tertbutylmethylether, dioxolane, formaldehyde, glyoxal, acetaldehyde, N,N-dimethyl formamide, N,N-dimethylacetamide, N,N-diethylformamide, and N-methylpyrrolidone.
8. **(CURRENTLY AMENDED)** The process ~~Process~~ according to ~~claims 6-7~~ claim 6, wherein the amount of organic compound varies between 0.1 and 5%.
9. **(CURRENTLY AMENDED)** The process ~~Process~~ according to ~~claims 6-7~~ claim 1, wherein the amount of radiation used is comprised between 400 and 8,000 kGy.
10. **(CURRENTLY AMENDED)** Glycosaminoglycanes ~~obtainable~~ obtained by the process of any one of claims 1-9.